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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/170,336	10/13/1998	JOHN STUART BEETESON	UK9-98-026	6676

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IBM CORP
IP LAW DEPT
TJ WATSON RESEARCH CENTER
P O BOX 218
YORKTOWN HEIGHTS, NY 10598

EXAMINER

NGUYEN, KEVIN M

ART UNIT PAPER NUMBER

2674

DATE MAILED: 02/05/2004

24

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/170,336

Applicant(s)

BEETESON ET AL.

Examiner

Kevin M. Nguyen

Art Unit

2674

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

1. The request for reconsideration filed on 12/10/2003 has been fully considered but they are not persuasive. The rejections of claims 1-11 are maintained.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-5 are rejected under 35 U.S.C. 102(e) as being anticipated by Sanou et al (US 6,121,942).

As to claim 1, Sanou et al teach the field emission display FED which includes a cathode means; a row-directional wiring "Dx1 to Dxm", a column directional wiring "Dy1 to Dyn", a multi-election beam source having cathode devices arrayed with the simple matrix wiring "Dx1 to Dxm" and "Dy1 to Dyn"; providing the black level Va'/Va and corrected voltage Va' to one of a row plurality of parallel conductors Dx1 to Dxm (see figure 24, column 29, lines 1-23).

As to claim 2, Sanou et al teach providing a gain correction voltage 87 to a one of the row plurality of parallel conductors Dx1 to Dxm (see figure 24).

As to claim 3, Sanou et al teach a memory 85 for storing a correction value table 3 (see figure 24).

As to claim 4, Sanou et al teach the screen having a fluorescent substance (see column 28, line 16).

As to claim 5, Sanou et al teach providing the corrected voltage V_a' and the gain correction voltage 87 to all row plurality of parallel conductors Dx1 to Dx_m (see figure 24, column 29, lines 1-23).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sanou et al in view of Nakamura et al (previous cited reference, US 5,818,403).

As to claim 6, Sanou et al teach all of the claimed limitation of claim 1, except for "...occurring during warm up." However, Nakamura et al teach the types of the electron-emitting devices are not specially limited, but cold cathode type display devices are preferred. The hot cathode is affected by temperature distribution (see column 7, lines 25-33). It would have been obvious to a person of ordinary skill in the art at the time of the invention to substitute the hot cathode being affected by temperature distribution taught by Nakamura et al for Sanou et al's cold cathode because this would provide a compensate image data occurring during warm up to obtain an image with high fineness, high sharpness, and high contrast (column 2, lines 51-52 of Nakamura et al).

Art Unit: 2674

4. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sanou et al in view of Nakamura et al, and further in view of Applicant Admitted Prior Art hereinafter AAPA.

As to claim 7, Sanou et al and Nakamura et al teach all of the claimed limitation of claim 1, except for "anode means comprising a plurality of anodes extending parallel to the column conductors, the anode means comprising pairs of anodes each corresponding to a different column conductor, each pair comprising first and second anodes respectively extending along opposites sides of the corresponding column conductor, the first anode being interconnected and the second anodes being interconnected." However, AAPA reviews in the background of the invention that the anodes of each pair extend along opposite sides of the corresponding column of pixel wells 70. Each pixel well 70 is situated at the intersection of a different combination of a grid conductor and a column grid conductor (see page 1, lines 27-29, page 2, lines 3-6). It would have been obvious to a person of ordinary skill in the art at the time of the invention to substitute the anodes of each pair extend along opposite sides of the corresponding column of pixel wells 70. Each pixel well 70 is situated at the intersection of a different combination of a grid conductor and a column grid conductor taught by AAPA for Sanou et al' s anodes because this would operate the electrons being released from the cathode and attracted towards the anode to hit the phosphor surface.

5. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sanou et al in view of Nakamura et al, and further in view of Sakamoto (US 5,594,463).

Art Unit: 2674

As to claim 8, Sanou et al and Nakamura et al teach all of the claimed limitation of claim 1, except for temperature sensor. However, Sakamoto teaches a related electron-emitting device which includes a temperature sensor 80 (see figure 5). It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide the temperature sensor 80 taught by Sakamoto for Sanou et al's electron-emitting device because this would maintain a luminance of the display element constant in correspondence with the detection signal from the detection device (column 2, lines 55-57 of Sakamoto).

6. Claims 9-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Sanou et al (US 6,121,942) in view of Dunham (previous cited reference, US 5,262,698).

As to claims 9-11, Sanou et al teach all of the claimed limitation of claim 1, except for "...varying according to the physical location of each of said first plurality of parallel conductors and according to which of said second plurality of parallel conductors is selected." However, Dunham teaches a related electron-emitting device which includes an adjustable voltage driver 102, 104 coupling to a voltage source providing the V_{REF} voltage rails on both row and column drivers 90 and 86 in order to properly select and maintain values of V_{ROW} and V_{REF} (see figure 4, column 9, lines 28-31). It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide the adjustable voltage driver 102, 104 taught by Dunham for Sanou et al's adjustable voltage 87 because this would provide the desired levels of electron beam current (column 9, line 34 of Dunham).

Response to Arguments

7. Applicant's arguments filed 12/10/2003 have been fully considered but they are not persuasive.

8. In response to applicant's argument that recited in page 6, line 14 through page 8, the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

9. In response to applicant's argument that claim 1 recites "means for providing cut-off correction information to one of said first or said second plurality of parallel conductors." This argument is not persuasive because Sanou et al's invention teaches the field emission display FED which includes providing cut-off correction information (the black level V_a'/V_a and corrected voltage V_a') to one of a row plurality of parallel conductors Dx1 to Dx_m (see figure 24, column 29, lines 1-23).

10. In response to applicant's argument that claim 6 recites "... occurring during warm up." This argument is not persuasive because Nakamura et al's invention teaches the types of the electron-emitting devices are not specially limited, but cold cathode type display devices are preferred. The hot cathode is affected by temperature distribution (see column 7, lines 25-33).

In response to applicant's argument that recited in page 9, 1st last line through page 10, line 1 "applicant believe that one having skill in the art would not logically modify Sanou with Nakamura," there is no suggestion to combine the references, the

examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, it would have been obvious to a person of ordinary skill in the art at the time of the invention to substitute the hot cathode being affected by temperature distribution taught by Nakamura et al for Sanou et al's cold cathode because this would provide a compensate image data occurring during warm up to obtain an image with high fineness, high sharpness, and high contrast (column 2, lines 51-52 of Nakamura et al).

11. In response to applicant's argument that claim 7 recites in [lines 5-12 of claim 7]. This argument is not persuasive because AAPA reviews in the background of the invention that the anodes of each pair extend along opposite sides of the corresponding column of pixel wells 70. Each pixel well 70 is situated at the intersection of a different combination of a grid conductor and a column grid conductor (see page 1, lines 27-29, page 2, lines 3-6).

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in

Art Unit: 2674

the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, it would have been obvious to a person of ordinary skill in the art at the time of the invention to substitute the anodes of each pair extend along opposite sides of the corresponding column of pixel wells 70. Each pixel well 70 is situated at the intersection of a different combination of a grid conductor and a column grid conductor taught by AAPA for Sanou et al' s anodes because this would operate the electrons being released from the cathode and attracted towards the anode to hit the phosphor surface.

12. In response to applicant's argument that the references fail to show certain features of applicant's invention (page 10, line 9), it is noted that the features upon which applicant relies (i.e., a magnetic matrix) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

13. In response to applicant's argument that claim 8 recites "temperature sensor." This argument is not persuasive because Sakamoto's invention teaches a related electron-emitting device which includes a temperature sensor 80 (see figure 5).

14. In response to applicant's argument that claim 9-11 recite "...varying according to the physical location of each of said second plurality of parallel conductors and each of said first plurality of parallel conductors." This argument is not persuasive because Dunham's invention teaches a related electron-emitting device which includes an adjustable voltage driver 102, 104 coupling to a voltage source providing the V_{REF}

voltage rails on both row and column drivers 90 and 86 in order to properly select and maintain values of V_{ROW} and V_{REF} (see figure 4, column 9, lines 28-31).

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, it would have been obvious to a person of ordinary skill in the art at the time of the invention to provide the adjustable voltage driver 102, 104 taught by Dunham for Sanou et al's adjustable voltage 87 because this would provide the desired levels of electron beam current (column 9, line 34 of Dunham).

For these reasons, the rejections based on Sanou et al, Nakamura et al, AAPA, Sakamoto, and Dunham have been maintained.

Conclusion

15. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Kevin M. Nguyen** whose telephone number is **703-305-6209**. The examiner can normally be reached on MON-THU from 9:00-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Richard A Hjerpe** can be reached on **703-305-4709**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered response should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Application/Control Number: 09/170,336

Page 11

Art Unit: 2674

Kevin M. Nguyen
Patent Examiner
Art Unit 2674

KN
February 3, 2004


XIAO WU
PRIMARY EXAMINER